

Hour of Code: Coding @Your Library

Daniel Cornwall, Alaska State Library



Claudia Haines, Homer Public Library

November 6, 2015

Agenda

- Hour of Code Overview – Daniel
- Hour of Code at Homer Public Library – Claudia
- Tools for Hour of Code – Claudia
- Q&A – Claudia and Daniel

Hour of Code: What is It?

- An educational event in December focusing on computer programming for ages 4-104.
 - Why December? Admiral Grace Hopper
- A set of tutorials at <http://code.org/learn>
- Something that can be done any time
- Maybe a bridge builder to teachers, students and community



James S. Davis - U.S. Naval Historical Center
Online Library Photograph NH 96919-KN
(jpg)

A promotional banner for a Code.org program featuring Disney's Anna and Elsa. Anna is on the left, Elsa on the right, and a small character stands in the center of a large, intricate snowflake made of overlapping squares. Below the snowflake is a code block with the text: 'move forward by 100 pixels' and 'turn right by 90 degrees'. The background is a light blue gradient.

Code with Anna and Elsa

Code.org

Let's use code to join Anna and Elsa as they explore the magic and beauty of ice. You will create snowflakes and patterns as you ice-skate and make a winter wonderland that you can then share with your friends!

Ages 8+ | Modern browsers + tablets

5,589,833 participants

<http://hourofcode.com/frzn>

Teachers: [Read important educator notes here](#)

Go

Creativity powered by Disney INFINITY

© Disney

Tutorials for Beginners

A promotional banner for a Code.org program titled 'Write your first computer program'. It features a photo of Mark Zuckerberg, a red Angry Bird character, and a green Piggy character. Below the photo is a code block with the text: 'move forward' and 'turn right'. The background is a dark grey gradient.

Write your first computer program

Code.org

Learn the basic concepts of Computer Science with drag and drop programming. This is a game-like, self-directed tutorial starring video lectures by Bill Gates, Mark Zuckerberg, Angry Birds and Plants vs. Zombies. Learn repeat-loops, conditionals, and basic algorithms. Available in 34 languages.

Ages 4-104 | Modern browsers, smartphones, tablets

26,390,847 participants

Teacher's Notes

<http://hourofcode.com/code>

Go

Tutorials that teach JavaScript



An introduction to JavaScript

KhanAcademy

Learn the basics of JavaScript programming while creating fun drawings with your code. Do it on your own or with your class!

Middle school + | Modern web browsers

3,109,653 participants

Teacher's Notes

<http://hourofcode.com/kh>

Go



No device or internet? Try 'unplugged' computer science



My Robotic Friends

Thinkersmith

Using a pre-defined "Robot Vocabulary" students will figure out how to guide each other to accomplish specific tasks without discussing them first. This lesson teaches children the connection between symbols and actions, as well as the invaluable skill of debugging. "My Robotic Friends" works best as a group activity and includes a teacher workbook for classroom use.

All ages | Unplugged

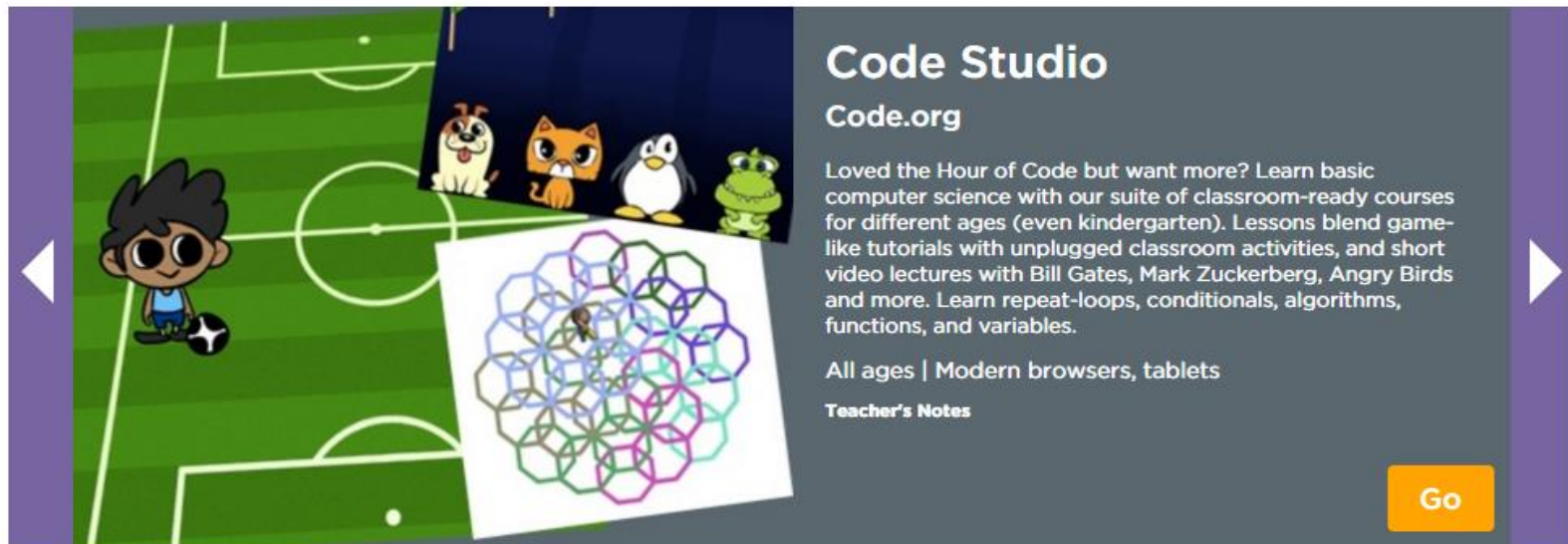
275,799 participants

<http://hourofcode.com/ts>

Go



Tutorials for Beginners

A banner for Code Studio. On the left, a cartoon boy with dark hair and glasses stands on a green soccer field. To his right, a whiteboard displays a colorful geometric pattern made of overlapping hexagons. Above the whiteboard, four cartoon animals—a dog, a cat, a penguin, and a frog—are lined up. The background is a dark blue gradient.

Code Studio

Code.org

Loved the Hour of Code but want more? Learn basic computer science with our suite of classroom-ready courses for different ages (even kindergarten). Lessons blend game-like tutorials with unplugged classroom activities, and short video lectures with Bill Gates, Mark Zuckerberg, Angry Birds and more. Learn repeat-loops, conditionals, algorithms, functions, and variables.

All ages | Modern browsers, tablets

Teacher's Notes

[Go](#)



Tutorials that teach JavaScript

A banner for Khan Academy's JavaScript tutorials. On the left, a code editor window shows JavaScript code for drawing a penguin. Next to the code is a small illustration of a penguin. Below the code editor is a laptop with the Khan Academy (KA) logo and a yellow cartoon character. The background is a dark blue gradient.

Learn computer programming

Khan Academy

Learn the basics of JavaScript programming while creating fun drawings with your code. Do it on your own or with your class!

Middle school + | Modern Web browsers

Teacher's Notes

[Go](#)

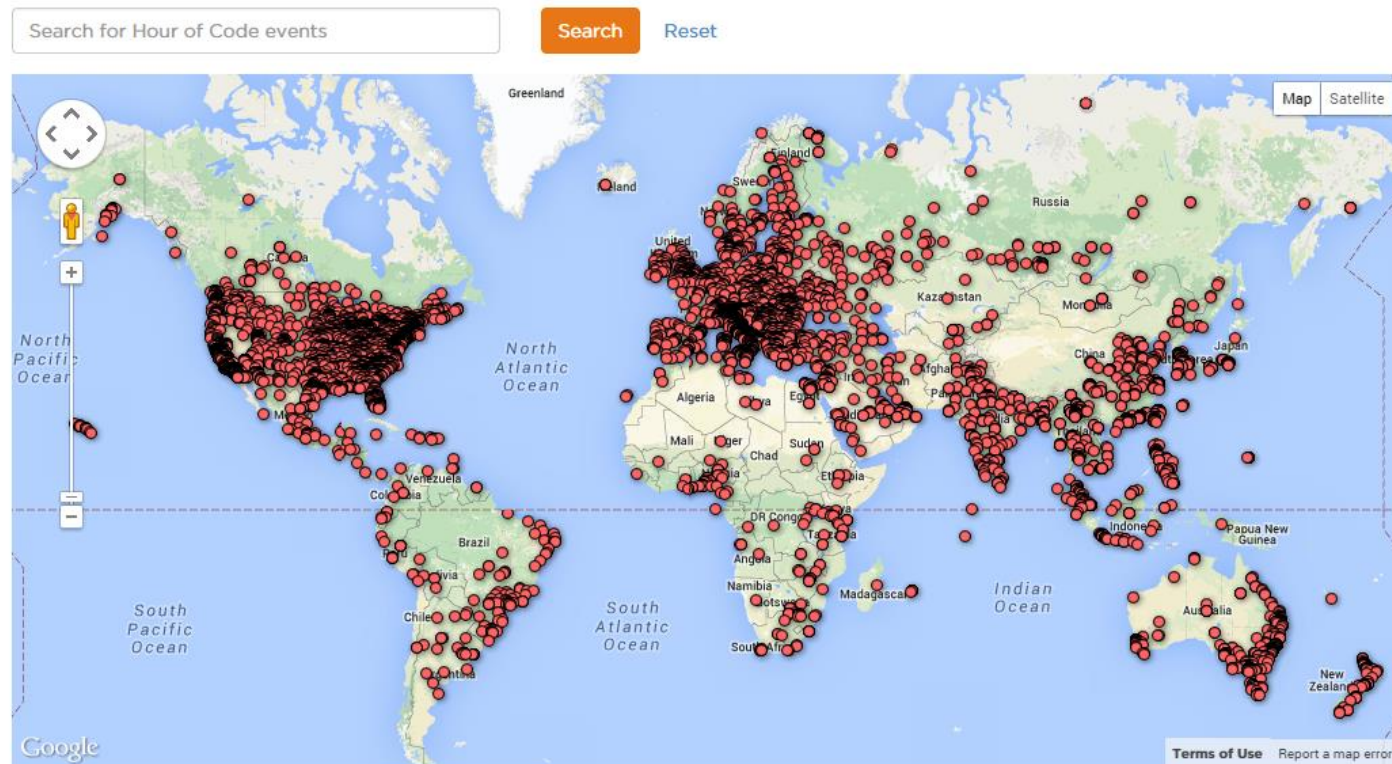


Hour of Code: How Big is It?

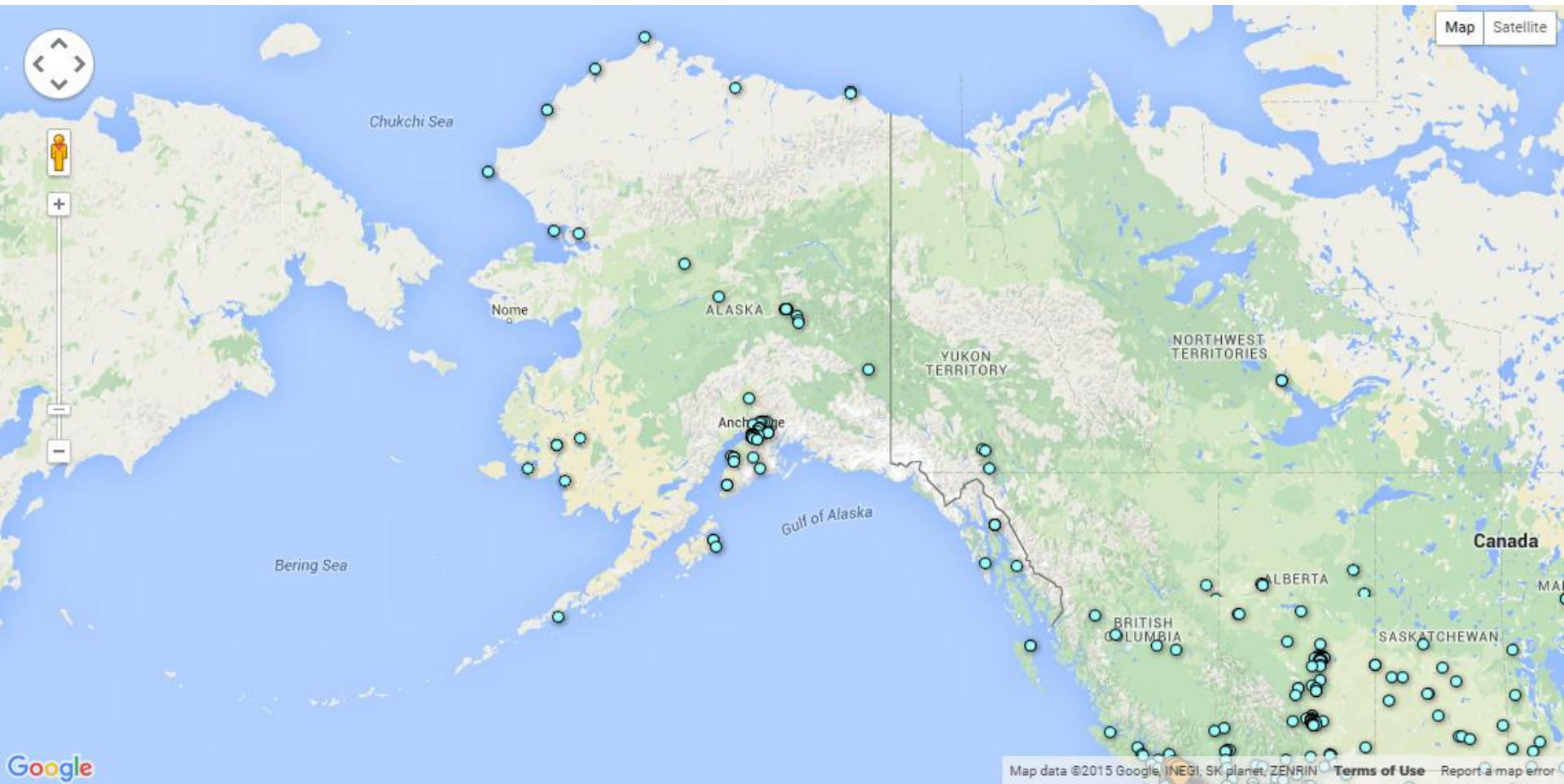
77,461 Hour of Code events around the world

15,000,000 people took part in Hour of Code 2014.

[See all events](#)



Hour of Code: How Big is It in Alaska?



Hour of Code: Who's Behind It?

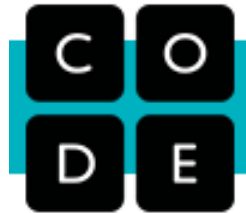
amazon.com



Moscow
Coding
School



CollegeBoard



Fundación
Transforma
España



Afterschool
Alliance



HOPSCOTCH



GREAT!
SCHOOLS



LIVE
CODE

And MANY,
MANY, More!

HOUR
OF
CODE

at the Homer Public Library





Media Mentorship in Libraries Serving Youth



Adopted by the ALSC
Board of Directors on
March 11, 2015



Written for the Association for Library Service to Children by
Cen Campbell, Claudia Haines, Amy Koester, and Dorothy Stoltz

You're Invited to...

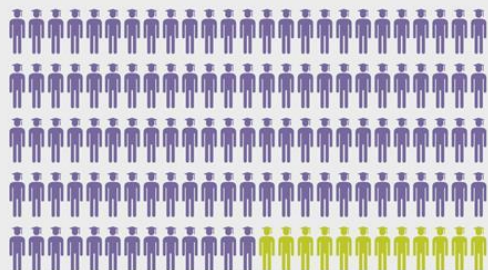


Made w/Code:

An Intro to < Coding/> for Girls

Learn how to make your own story, game or digital tool
by creating code with easy to use drag and drop code blocks

Gender Inequity



While, 57% of bachelor's degrees are earned by women, **just 12% of computer science degrees** are awarded to women.

HOURL
OF
CODE

Start with one #HourOfCode

Saturday, December 13th 3-5pm

Homer Public Library

Refreshments provided

For ages 8-12, FREE

Moms, Grandmothers, Aunts, & Big Sisters
welcome! Come code with the girls!



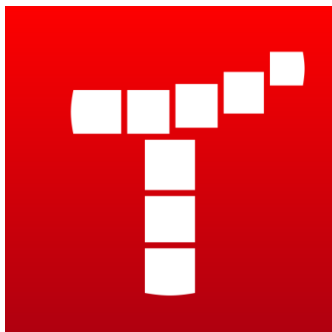
For more information, contact Claudia Haines, Homer Public Library: 235-3180 or chaines@cityofhomer-ak.gov



Coding Unplugged: P, B & J



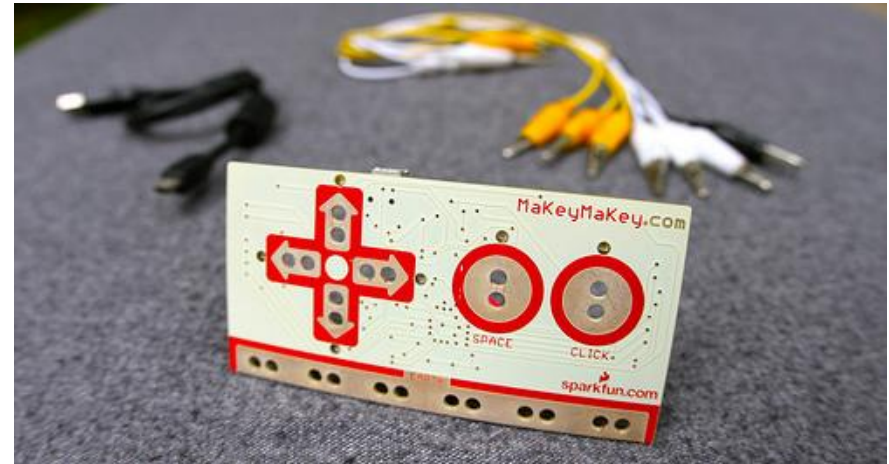
Coding Tools We Used



2015 Hour of Code



SCRATCH & Makey Makey



makeymakey.com

SCRATCH

The image shows the Scratch desktop application interface. At the top is a menu bar with 'Scratch', 'File', 'Edit', 'Tips', and 'About'. To the right of the menu bar are icons for user, preferences, and help, followed by 'Sign in to save' and 'Sign in' buttons. Below the menu bar is a toolbar with a 'v430' version indicator, a text input field containing 'Untitled', and flags for green and red. The main workspace on the left displays a cat sprite. Below the workspace is a 'Sprites' panel with a 'New sprite:' button and icons for selecting a sprite, drawing a new one, uploading, or taking a photo. A small cat sprite labeled 'Sprite1' is shown in the panel. To the right of the workspace is a 'Scripts' panel with tabs for 'Scripts', 'Costumes', and 'Sounds'. The 'Scripts' tab is active, showing a list of block categories: Motion, Looks, Sound, Pen, Data, Events, Control, Sensing, Operators, and More Blocks. A script is being built in the workspace, consisting of a 'move 10 steps' block followed by a 'play sound meow' block. Below the script editor is a 'Stage' panel with a '1 backdrop' and a 'New backdrop:' button with icons for selecting a backdrop, drawing a new one, uploading, or taking a photo. On the far right is a sidebar with 'Step-by-Step Guides' (Getting Started with Scratch, Animate Your Name, Design a Holiday Card, Create a Pong Game, Make a Birthday Card), 'How To' (Effects, Animation, Games, Stories, Music), and 'Blocks' (Motion, Looks, Sound, Pen, Data, Events, Control, Sensing, Operators, More Blocks, Extensions).

Scratch v430

Untitled

Sign in to save Sign in

Sprites

New sprite:

Stage

1 backdrop

New backdrop:

Scripts

Costumes

Sounds

Motion

Looks

Sound

Pen

Data

Events

Control

Sensing

Operators

More Blocks

move 10 steps

play sound meow

play sound meow

play sound meow until done

stop all sounds

play drum 1 for 0.25 beats

rest for 0.25 beats

play note 60 for 0.5 beats

set instrument to 1

change volume by -10

set volume to 100 %

volume

change tempo by 20

set tempo to 60 bpm

tempo

Step-by-Step Guides

- Getting Started with Scratch
- Animate Your Name
- Design a Holiday Card
- Create a Pong Game
- Make a Birthday Card

How To

- + Effects
- + Animation
- + Games
- + Stories
- + Music

Blocks

- + Motion
- + Looks
- + Sound
- + Pen
- + Data
- + Events
- + Control
- + Sensing
- + Operators
- + More Blocks
- + Extensions

Resources for Librarians and Educators:

[Hour of Code](#)

[ScratchEd](#)

[Code Academy](#)

[Khan Academy](#)